

Understanding Supply Chain Risk Matrices

Risk can be Analyzed Using Several Types of Tools; HP Matches Risk Areas with Supply Chain Processes

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Supply Chain Risk Management has become one of the top concerns of many companies and supply chain executives, as the industry gains a greater conceptual understanding of the real costs of supply chain disruptions, combined with recent incidents such as the Mattel toy recall disaster and Boeing's massive Dreamliner delays that have reinforced the point.

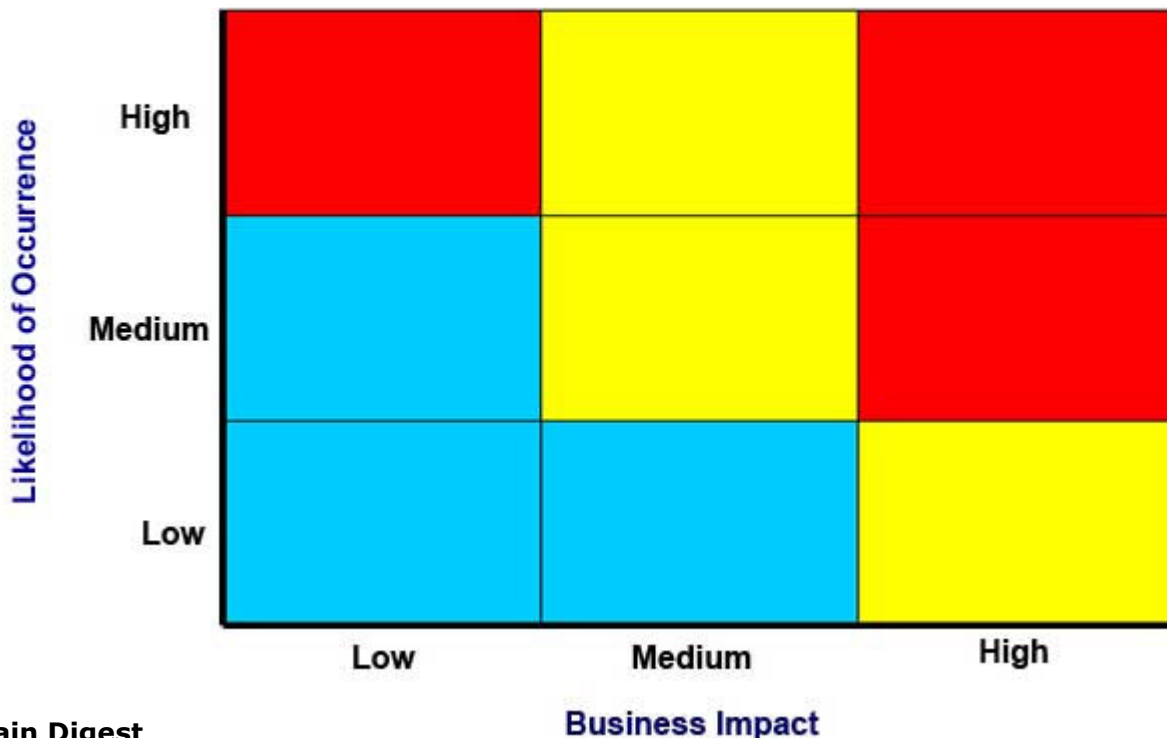
By now, most companies understand that one essential tool for assessing and planning for risk is to develop a two-by-two or three-by-three matrix, as shown below, that plots the likelihood of a given risk along one dimension, and the impact of the

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event, if it were to occur, along another.

The idea is that after different potential supply chain risks have been identified, they can be clas-

Basic Risk Matrix



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sified along each dimension. While companies can assess these risks in different ways, a color scheme similar to the one provided below is often used. The red areas indicating risks that need the greatest attention in terms of mitigation strategies, either because they will have a very large impact if they were to occur, or else are very likely to occur; yellow is the next level down, and blue the least worrisome categories.

HP's Approach

HP is among the companies that employs another type of matrix, one which maps different types of risks against their impact on specific supply chain functions or processes.

As detailed by **Christian Verstaete** in the most recent issue of CSCMP's Supply Chain

Quarterly. HP uses the matrix below to help it understand the impact of specific types of supply chain disruptions.

This type of risk assessment matrix helps a company focus which functional or supply chain process areas of the company need to taken action to mitigate specific risk types (e.g., quality failures, logistics failures, etc). It also helps companies visualize the interdependencies among functions and processes to specific risk types.

"As companies become increasingly global, their exposure to risk increases," Verstaete adds. "Despite this fact, many companies are not yet prepared to identify and address supply chain risks. These companies thus make themselves more vulnerable to business disruptions."

Using these types of tools is a solid place to start.

	Natural/man-made hazards	Country risks	Supplier bankruptcy	Network/software outage	Internet provider risks	Regulatory risk	Commodity price risks	Workforce practices	Logistics failure	Inventory risks	Quality risks
Globalization and outsourcing	Moderate impact	High impact		Moderate impact	High impact	High impact		High impact	Moderate impact		High impact
Sole sourcing	High impact	Moderate impact	High impact		High impact		Moderate impact	Moderate impact			High impact
Lean practices	High impact		Moderate impact	Moderate impact					High impact	High impact	Moderate impact
Distribution hubs	High impact			Moderate impact					High impact		
Commodity dependency	Moderate impact	Moderate impact					High impact		Moderate impact		
Demand visibility/variability				Moderate impact			High impact			High impact	
Supply tiering	Moderate impact		High impact		Moderate impact	Moderate impact			Moderate impact		High impact
Returns management					Moderate impact	High impact			Moderate impact	Moderate impact	High impact

Source: Christian Verstaete, HP